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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,026	07/07/2003	Kyoung-Geun Lee	Q75617	6516

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EXAMINER

NATNAEL, PAULOS M

ART UNIT	PAPER NUMBER
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2622

DATE MAILED: 04/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/613,026	Applicant(s) LEE ET AL.	
	Examiner Paulos M. Natnael	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 9 is/are rejected.
- 7) ☒ Claim(s) 3-8 and 10-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-2 and 9 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2 and 7 of U.S. Patent No. 6,853,157. Although the conflicting claims are not identical, they are not patentably distinct from each other because allowing the invention defined by claims 1-2 and 9 of the instant application would result in an unwarranted timewise extension of the monopoly defined by the invention of claims 1-2 and 7 of Patent No. 6,853,157.

Considering claim 1, the claimed

a) a correction value generation unit for calculating a convergence correction value to correct misconvergence occurring when a video signal is scanned on a display device, is met by the limitation "a compensation value generator for calculating a convergence compensation value for compensating a convergence distortion which occurs while an image signal is emitted onto a display apparatus, the compensation value generator outputting the convergence compensation value after compensating for a phase and a gain of the convergence yoke," claim 1, of Patent No. 6,853,157.

b) an amplification unit for performing a D-class amplification with respect to the convergence correction value, is met by the limitation "an amplifier of a D-class for amplifying the convergence compensation value", of claim 1, of Patent No. 6,853,157.

c) a convergence yoke mounted in the display device to control a path of an electron beam corresponding to the video signal based on the convergence correction value amplified in the amplification unit, is met by the limitation "a convergence yoke for controlling a path of electron beams corresponding to the image signal, based on the convergence compensation value as amplified at the amplifier", claim 1 of Patent No. 6,853,157.

d) and a feedback sensing unit for differentially amplifying a voltage value for electric current passing through the convergence yoke, and feeding back the differentially

amplified voltage value to the correction value generation unit, is met by the limitation “and a feedback sensor provided between the convergence yoke and the compensation value generator, for reducing a noise outputted from the convergence yoke through a differential amplification” of claim 1, Patent No. 6,853,157.

Considering claim 2, the claimed

a) a convergence module for outputting a pre-set misconvergence value, is met by the limitation “a convergence module for synchronization to a horizontal synchronization signal and a vertical synchronization signal applied to the display apparatus and outputting a predetermined convergence distortion value;

b) a triangular waveform generation unit for generating a triangular...is met by the limitation “a triangular wave generator for generating a triangular wave” of claim 2,

c) a combining unit for combining the misconvergence value and an output voltage of the feedback sensing unit, is met by the limitation “a combiner for combining the convergence distortion value and an output from the feedback sensor, of claim 2,

d) a comparison unit for comparing potential levels of voltages outputted from the combining unit and the triangular waveform generation unit, is met by the limitation “a comparator for comparing the convergence distortion value outputted from the combiner with a phase level of the triangular wave” of claim 2.

e) and a pulse generation unit for generating a pulse width-modulated signal based on a comparison result of the comparison unit is met by the limitation, “and a pulse generator for generating the convergence compensation value in a form of a pulse width modulating signal based on the comparison result from the comparator”, of claim 2.

As to the claimed phrase, “based on a pre-set frequency” in b), although the patent does not claim generation of the waveform is based on a preset frequency, the specification describes the it would have been obvious to those with ordinary skill in the art to readily realize the waveform generation would be based on a selected, desired frequency and would have been obvious to implement the invention accordingly.

Considering claim 9, the claimed

a) calculating a convergence correction value of a pulse to correct a misconvergence value of a video signal outputted from a display device, is met by “calculating a convergence compensation value for compensating a convergence distortion which occurs while an image signal is emitted onto a display apparatus in consideration of a phase and a gain of the convergence yoke” claim 7, of patent 6,853,157.

b) performing D-class amplification with respect to the convergence correction value to amplify voltages and currents, is met by the limitation “ D-class amplifying in response to the convergence compensation value”, of claim 7, patent 6,853,157.

c) controlling a path of an electron beam corresponding to the video signal by a magnetic field formed according to a current based on the D-class-amplified convergence correction value, is met by the limitation "and controlling a path of electron beams corresponding to the image signal by the magnetic field as formed", of claim 7, patent 6,853,157.

d) and calculating a voltage value for a noise-removed current, and feeding back to the step for calculating the convergence correction value, is met by the limitation "sensing an output of the convergence yoke and removing a noise from the convergence yoke output through a differential amplification", of claim 7, patent 6,853,157.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA) as illustrated on Prior art Figure 4.

Considering claim 9, the Admitted prior Art ("APA") discloses a correction value generator 33 that calculates a convergence correction value to correct convergence of a video signal based on a convergence distortion value, a D-Class amplifier 34 that amplifies the data output by the convergence value generator, a convergence yoke 41,

a feedback line, and a resistor 36 for converting current flowing through the convergence unit into a voltage value and feeding it back into the correction value generator 33, as describe in applicant's specification on pages 4 and 5. Thus, the APA teaches all claimed subject matter as claimed.

Allowable Subject Matter

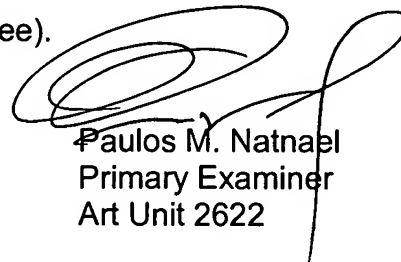
5. Claims 3-8, 10-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paulos M. Natnael whose telephone number is (571) 272-7354. The examiner can normally be reached on 9am - 5:30pm M,W, F (7am-3:30pm T,Th).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571)272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paulos M. Natnapi
Primary Examiner
Art Unit 2622

PMN
April 26, 2006